

Original

T-12518

T-12518

NOAA FORM 76-35	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Type of Survey .. Shoreline Mapping .....	
Job No. .. PH-6404 .....	Map No. T-12518 .....
Classification No. III	Edition No. .. I .....
LOCALITY	
State .. Florida .....	
General Locality .. Florida Keys .....	
Locality .. Hawk Channel - Pelican Shoal .....	
.....	
<hr/> 1963 TO 1964 <hr/>	
REGISTRY IN ARCHIVES	
DATE .....	

MAP NOT INSPECTED IN QUALITY CONTROL PRIOR  
TO REGISTRATION

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
<b>DESCRIPTIVE REPORT - DATA RECORD</b>		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE  Rockville, Maryland		SURVEY TP <u>12518</u>  MAP EDITION NO. (1)  MAP CLASS III  JOB PH- <u>6404</u>	
OFFICER-IN-CHARGE Commander James Collins		LAST PRECEDING MAP EDITION  TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
JOB PH- <u>6404</u>  MAP CLASS <u>III</u>  SURVEY DATES: 19__ TO 19__			
<b>I. INSTRUCTIONS DATED</b>			
<b>1. OFFICE</b>		<b>2. FIELD</b>	
Project PH-6404, Shoreline Mapping, Key West to Sugarloaf, Fla. Dated May 18, 1964		Project PH-6404, Shoreline Map- ping, Key West to Sugarloaf, Fla., dated 11/22/63.  Amendment I, dated 2/6/64	
<b>II. DATUMS</b>			
1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify)	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify)	
3. MAP PROJECTION  Polyconic		4. GRID(S)  STATE Florida ZONE East	
5. SCALE 1:10,000		STATE ZONE	
<b>III. HISTORY OF OFFICE OPERATIONS</b>			
OPERATIONS		NAME	DATE
1. AEROTRIANGULATION BY METHOD: <u>Analog</u> LANDMARKS AND AIDS BY		<u>R. Kelly</u>	<u>7/64</u>
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: CHECKED BY		<u>J. Richter</u> <u>K. Maki</u>	<u>2/65</u> <u>2/65</u>
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: <u>B-8</u> CONTOURS BY SCALE: <u>1:10,000</u> CHECKED BY		<u>J. Richter</u> <u>K. Maki</u> <u>Inapplicable</u>	<u>2/65</u> <u>2/65</u> 
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY METHOD: <u>Graphic</u> CONTOURS BY SCALE: <u>1:10,000</u> CHECKED BY HYDRO SUPPORT DATA BY		<u>J. Richter</u> <u>K. Maki</u> <u>Inapplicable</u> <u>J. Richter</u> <u>K. Maki</u>	<u>2/65</u> <u>2/65</u>  <u>2/65</u> <u>2/65</u>
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		<u>K. Maki</u>	<u>2/65</u>
6. APPLICATION OF FIELD EDIT DATA BY CHECKED BY		<u>Inapplicable</u>	
7. COMPILATION SECTION REVIEW BY		<u>P. Dempsey</u>	<u>8/75</u>
8. FINAL REVIEW BY			
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY			
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY			
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		<u>N. Francis</u>	<u>9/24/75</u>

## COMPILATION SOURCES

T-12518

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) S & W Wild RC-8		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) COLOR (P) PANCHROMATIC (I) INFRARED B&W		ZONE Eastern	<input checked="" type="checkbox"/> STANDARD
<input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input checked="" type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 75th	<input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
63W 1985 - 1990	10/12/63	1624	1:30,000	The stage of tide is inapplicable for the color photography.	
64S581AR - 587AR	12/18/64	0857	1:30,000	0.1' below MHW at Ninefoot Shoal Light-house tide gage.	
REMARKS					

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The source of the mean high water line is the black-and-white tide-coordinated infrared photography listed under item 1.

## 3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

The mean low water line was delineated from the interpretation of the color photography.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

## 5. FINAL JUNCTIONS

NORTH T-12515	EAST No contem- porary Survey	SOUTH No contem- porary Survey	WEST T-12517
REMARKS			

T-12518

## HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	G. E. Varnadoe	7/64
2. HORIZONTAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
3. VERTICAL CONTROL	RECOVERED BY	
	ESTABLISHED BY	
	PRE-MARKED OR IDENTIFIED BY	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY	
	LOCATED (Field Methods) BY	
	IDENTIFIED BY	
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY BY <input type="checkbox"/> NO INVESTIGATION	Refer to summary
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
	Refer to field inspection		

3. PHOTO NUMBERS (Clarification of details)

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☐ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☐ NONE

7. SUPPLEMENTAL MAPS AND PLANS

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

## RECORD OF SURVEY USE

T-12518

## I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
There is no record that any copies of this map were submitted to the Marine Chart Division prior to registration.				
Copy of the Registered map submitted 9/75				

## II. LANDMARKS AND AIDS TO NAVIGATION

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
	No form 76-40	Landmarks	and Aids) were submitted to the Marine
	Chart division		

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: \_\_\_\_\_3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

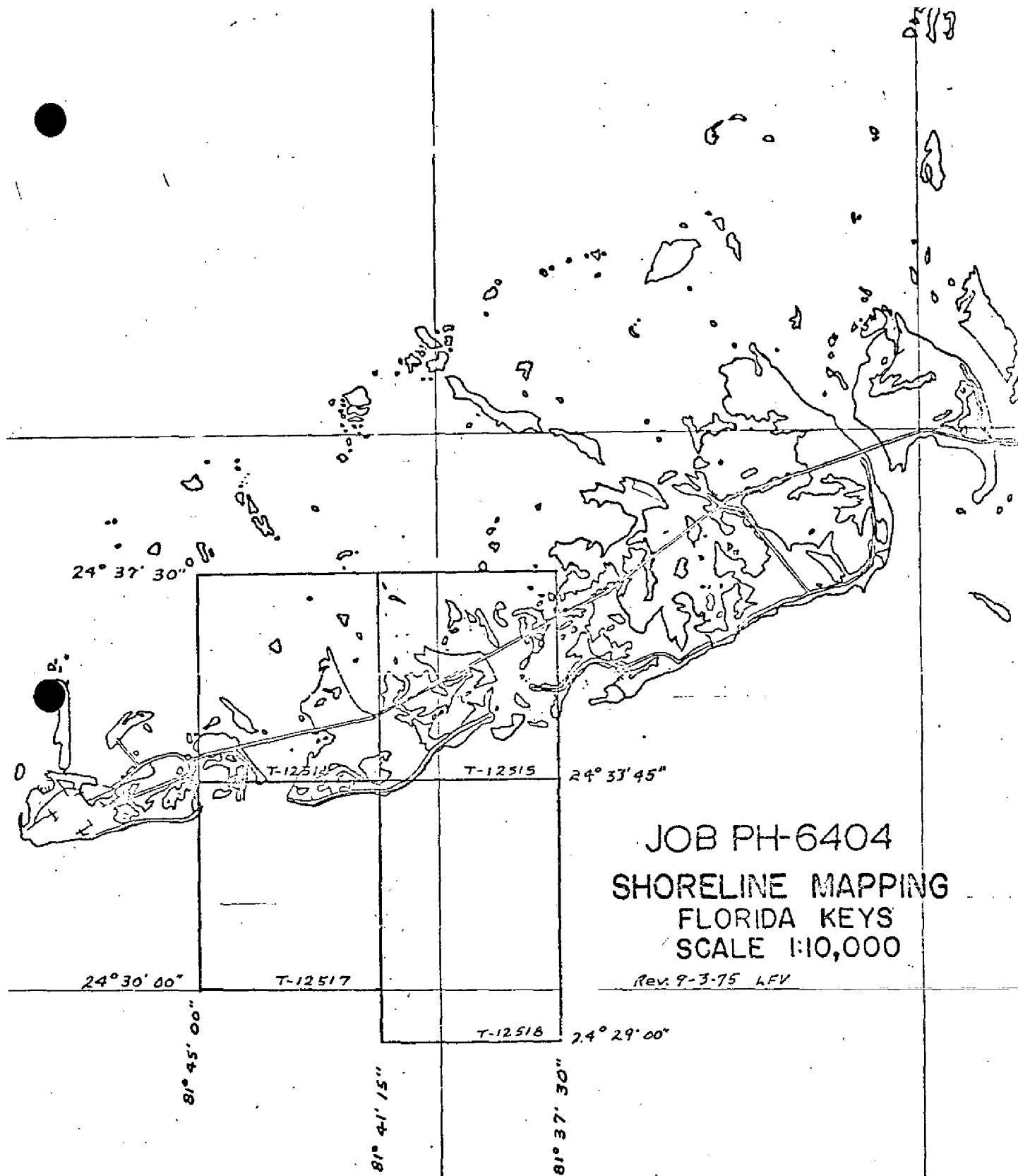
## III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☐ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.  
2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM NOS 567 SUBMITTED BY FIELD PARTIES.  
3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.  
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: \_\_\_\_\_

## IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	<input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	<input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	<input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



OFFICIAL MILEAGE FOR COST ACCOUNTS

<u>Sheet No.</u>	<u>Area Sq. Mi.</u>
T-12514	4
T-12515	5
T-12517	1
T-12518	1

Summary  
for  
T-12514 and T-12515  
T-12517 and T-12518

Project PH-6404 originally consisted of ten (10) 1:10,000 scale shoreline maps. Six of these maps are now cancelled from the project. The shoreline compilation for the remaining maps, T-12514, T-12515, T-12517, and T-12518, is incomplete and is discussed in their compilation reports. The index to adjoining maps will show the location of these maps.

These maps provided topographic information for nautical charts and hydrographic surveys.

The area is covered by aerial photography taken in 1963 and 1964 on color and infrared film. The infrared film was tide coordinated.

Field operations consisted of the photo-identification of horizontal control.

Horizontal control was extended by aerotriangulation (analog method) using the stereoplanigraph.

There was no field edit for these four maps.

The four Class III maps will be registered in the NOS Archives. The negatives for these maps are on file in the NOS Reproduction Division.

A field inspection was made for Project PH-6404 but was not available at the time of compilation. Since this area is presently being mapped by the NOS Cooperative Coastal Boundary Mapping Program and the maps were used only for hydrographic surveys, the field inspection will not be applied to the maps compiled in this project.



## Field Inspection Report

*Ph6404*  
Project ~~21417~~

Sheets T-12509 to 12518 inc.

### 2. Areal Field Inspection.

The area is best described by the photography. There are no areas of particular historical or other interest.

The photography is substandard. The definition is poor. The scale is inadequate for field inspection. In areas of congested cultural features, ratio prints were furnished and field inspection notes will also be found on these.

Milky areas in water as labeled on photos 63W 1960 (T-12510) and 1975 (T-12514) is "coral silt" mixed in water. (In areas where there is little current this silt settles and is sometimes as much as 2 feet deep.) It does not indicate any change or certain depths in water.

### 3. Horizontal Control.

Two supplemental stations were established and identified for the plot. They are "Control Point Pelican" and "Control Point Mid Sambo." They were not permanently marked as they are located on rocks and sand bars that shift. These bars are on a reef about five miles offshore on the Atlantic side, one of which shifted about 30 feet overnight during calm weather.

The only known control in the area was established by this bureau, all of which was searched for and reported on form 526. Stations not recovered are: Beacon H, Sam, O'Hara, B 3 Battery, Perky Southwest Base, Perky Base A, Pel, Neck, North Snipe, Marvy, Midhar, Chan (USAF), Chica, and Key West Coast Guard Signal Mast.

### 4. Vertical Control.

Only the recovery and identification of tidal bench marks is applicable to this project. Five sets of these bench marks are within the project limits. At least one in each set of four were recovered and identified. (ne

set, "Sandy Point, Boca Chica Key, Boca Chica Channel," on triangulation station and reference mark, "Chan 1934," is lost.

5. Contours and Drainage.

Inapplicable.

6. Woodland Cover.

Practically all woodland cover is mangrove ranging from low, scattered to dense swamp, some of which are fifty to sixty feet tall. The few areas of trees have been labeled.

7. Shoreline and Alongshore Features.

The greater percentage of the shoreline is apparent along the mangrove keys and islets. The small areas of MHWL (fast shoreline) have been labeled or indicated by symbols.

Vast areas in the bays near the gulf are very shallow flats, which bare at MLW. Sufficient areas have been labeled "Bare at MLW" or "Shallow" to enable the compiler to map similar areas by analogy. This also applies to areas of mangrove, scattered mangrove, etc.

The foreshore along the areas of fast shoreline is sand and because of the small range of tide the MHWL and MLWL are separated by only a few feet horizontally, which hardly could be shown at 1:10,000 scale.

There are no bluffs or cliffs.

Piers, wharves and other shoreline structures have been labeled, and sketches made where necessary.

One submarine cable exists. It is alongside the bridge between Stock Island and Boca Chica Key. The end poles were identified on the photographs. The poles of overhead cables and wires along the other bridges were identified although the shallow water beneath is not navigable.

The areas labeled "spoil" at the south end of Stock Island and the north end of Raccoon Key on ratio print

63% 1985 are dredged from the basins between these spoils. This spoil, which is principally linerock, is sold and trucked away. Consequently, these spoils vary in height from day to day.

One landing strip is in the project. It is at Perky in sheet 12513.

The overhead cables crossing Sugarloaf Creek and Saddlebunch Harbor, between Saddlebunch Key, Bird Island and Geiger Key, as shown on Chart 854 no longer exist. Along the line of the latter are the remains of old bridge pilings.

For the overhead power cable between Stock Island and Boca Chica Key, Chart 854 shows an authorized vertical clearance of 60 feet over the main channel and 25 feet elsewhere.

It was brought to the attention of the writer that a boat struck this cable, where it crosses the westernmost channel, on the mast about 18 feet above water. A detailed investigation of the actual clearance was made by the Florida Keys Engineering Inc. A copy of their report, with chart letter, has been submitted to the Nautical Chart Division.

#### 8. Offshore Features.

All offshore features that could not be actually landed on were inspected from a boat at very close range, at, or very near MIN, and sufficient notes and labels made for accurate mapping. Features not discernible on the photographs, such as piles, were located by sextant fixes on photo points.

#### 9. Landmarks and Aids.

Landmarks were identified on the photographs and reported on form 567.

All aids to navigation in the project area are single piles and were located by sextant fixes and cuts from photo points.

Day beacons 92 through 143 are pointers on wooden 2x2's that are stuck inside 2-inch iron pipes which are driven into the bottom. These aids were premarked and located by photogrammetric methods in 1958 and from appearances have not been moved since. Many have one or more short iron pipes alongside which supported the aid before rusting off.

10. Boundaries, Monuments and Lines.

The only boundary line in the project encompasses a golf course on Stock Island and is delineated on the photographs.

11. Other Control.

None

12. Other Interior Features.

Roads and landmark buildings were classified on the photographs.

13. Geographic Names.

This is the subject of a special report which was submitted on 9 April, 1964.

Respectfully submitted,

*George E. Varnadoe*  
George E. Varnadoe  
23 June, 1964

# Aerotriangulation Report

Florida Keys

6404  
PH-~~21417~~

## 21. Area Covered

This report covers the bridging of the area in T-sheets 12514, 12515, 12516, 12517 and 12518.

## 22. Methods

A horizontal bridge was run on the C-8 Zeiss Stereo-planigraph, to provide pass points for compilation of shoreline. The bridging photography consisted of 63 W(c) 1982 through 1993. The adjustment on the IBM-650 utilized 8 control stations with 2 control stations used as checks.

## 23. Adequacy of Control

Control positions were adequate for bridge adjustment. Although it was noted that Key West Radio station WKWF and Key West Coast Guard station signal Mast. 1943 didn't have substitute stations. These would have been of value in adjusting this strip. The control station listed as Key West Coast Guard Station Signal Mast 1943 was found to be Key West Naval Storehouse Flagstaff. East Martello tower, 1909 substitute station 2 didn't hold in adjustment. Probable reason for station not holding is due to very poor image point.

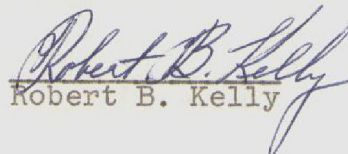
## 24. Supplemental Data

None

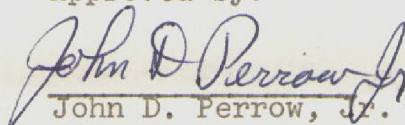
## 25. Photography

Photography was adequate as to coverage, overlap and definition.

Submitted by:

  
Robert B. Kelly

Approved by:

  
John D. Perrow, Jr.



Florida Keys,  
Project <sup>Ph-6404</sup> ~~21417~~

February 1965

Compilation Report for incomplete shoreline manuscripts  
T-12515, T-12517 and T-12518

The manuscripts were delineated by graphic method from infra-red photography.

Subsequent stereo-investigation of the color plates on the B-8 plotter revealed that an accurate delineation of the MHWL would be impossible with the color photos. The area is shallow ( $\frac{1}{2}$ -1 ft.) and the color looks into the water making shoreline determination poor at best.

Infra-red photography was flown at 1:30,000 scale at MHW on November 18, 1964. The color was set on the B-8 plotter and points common to the color and infra-red were pricked. Very few bridge points were visible on the infra-red photography.

The infra-red was ratioed and only the southern most shoreline has been delineated.

On manuscript T-12518 Pelican Shoal, Eastern Sambo and Middle Sambo were not shown as bridging was not available at this time.

The photography used was a single bridge strip of color, numbers 63 W 1985 thru 63 W 1990. Infra-red photography numbers 64 S 581 AR thru 64 S 587 AR was resected on to the manuscript and prepared for hydro support.

Geographic names were taken from Nautical Chart No. 854, 3rd edition June 22, 1964.

The buoys and day beacons were located from the 1963 color photography and should be checked.

Photo coverage was adequate.

Submitted by:

*J C Richter*  
J. C. Richter

GEOGRAPHIC NAMES  
Ph ~~21417~~ (Boca Chica, Fla.)  
6404

T-12517

Boca Chica Channel

Boca Chica Key

Cow Key

Cow Key Channel

Safe Harbor

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A. J. Wraight  
Geographic Names Section

T-12514, T-12515, T-12517, and T-12518

National Archives Data

1 Green Jacket (bridging data)

1 Green Jacket (field data)

Field photographs:

63W1985, 1987, 1988, and 1989